Proctor Creek in Blue and Green

Exploring Approaches to Planning in an Impaired Watershed

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Introduction

During a round of introductions at a meeting of the Proctor Creek Stewardship Council—a community-based group of stakeholders committed to the restoration and protection of their local urban waterway—Juanita Wallace tells a story about growing up on Proctor Creek. "We used to go down to the creek and catch crawfish, and cook them up for supper," she says. According to Wallace, the creek was a place they would spend their afternoons, a place that provided crawfish and catfish for their tables, and where children were baptized. But now, she says, they don't see wildlife in the creek, just the trash that people throw into it. It is a familiar and perhaps unremarkable story—the urbanization of cities leading to the transformation of natural waterways into conveyors of industrial waste, sewage, and trash. But it is a significant story, nonetheless, as it bears witness to the ecological and social change that has taken place over a few short generations, and calls

attention to the fact that memories and values associated with the once-healthy stream and its treasures are still very much alive.

Planning and community development efforts in impoverished urban areas are not often grounded in such acute ecological awareness, yet that seems to be precisely what is happening on Atlanta's northwest side. Whether at the grassroots level or at the federal agency level and everything in between, a renewed focus on the intersection of ecological and social impact of the impaired Proctor Creek watershed is taking hold. These efforts warrant special attention, as the various synergies created by their collective focus have the potential to add up to real and meaningful change and to provide a model for similarly situated communities elsewhere.

This paper will investigate such efforts in order to gain a better understanding of the motivating factors behind the various groups and projects focusing on the Proctor Creek watershed, their leadership, the policy environment in which they are operating (or seeking to change), and finally, the connections that may or may not exist between them. In investigating these linkages, this paper will seek to identify areas where synergistic focus can have the greatest impact, and will make recommendations aimed at maximizing the benefits of these combined activities.

In part one I will lay out a framework for understanding the social, ecological, and economic values of streams and greenways as public amenities, offering several examples of successful projects from around the country. Part two will focus on

developing an understanding of the conditions in and around Proctor Creek, and describing recent efforts underway to make improvements to the watershed. In part three I will analyze the connections among these various projects and groups, identify gaps as well as areas that represent opportunities for impact and early successes, and make recommendations toward that end.

Part I: Literature and Concepts

Waterfronts have long been a topic of interest for planners and economic developers as engines of economic regeneration in ailing urban cores. Many cities like Boston, Baltimore, and Washington, D.C. have reclaimed once-productive waterfronts that had lost their function in the modern economy by reorienting themselves toward the water as a cultural, recreational, and commercial resource. Recognizing and promoting the inherent value of water as a unique amenity is key to the success of these revitalized waterfronts. One question that arises is if these large-scale waterfronts are no longer valued as ports and industrial sites, but are instead successful as commercial and recreational destinations, can these successes be replicated on a smaller scale? This paper explores the idea that even the smallest urban waterways present opportunities to enhance economic value while providing a host of additional benefits as well.

To better understand the range of these potential benefits and further develop the idea creating urban greenways and waterfronts along small streams, this paper draws from a broad set of practice areas, including waterfront redevelopment, urban greenways, and green infrastructure and watershed management. The concept of a small-scale urban waterfront exists at the nexus of these practices, as the

development of the waterfront at this scale must derive benefits beyond what traditional waterfronts target. These additional benefits in turn function to widen the potential constituent base for such projects, increasing their chances for success. This review provides an overview of several of such projects, and draws on their examples to make recommendations for implementing similar development practices along Atlanta's Proctor Creek.

Contributing Practice Areas

The concept of creating small-scale waterfronts and greenways along urban streams is rooted in several practice areas. The main reason for this is a lack of current examples in the literature and in practice of this specific approach to urban streams. While models for redeveloping urban waterfronts abound, economic development alone is an insufficient argument for making improvements to smaller urban streams. Thus, we must turn to practices associated with urban greenways and watershed management as well in order to appreciate the full range of benefits such a project might encompass and develop an understanding for how techniques associated with each area might work together to create a synergistic mix of economic enhancement, recreational opportunity, and ecosystems services.

Urban Waterfronts

Urban waterfronts began as the focal points of many cities. These waterfronts were built as centers of commerce, transportation, and manufacturing. However, as transportation moved from bulk to containerized shipping and manufacturing moved out of cities, old industrial waterfronts became large swaths of contaminated and unused property (Breen, 1996). In the past thirty years however, these properties have become recognized as prime for redevelopment, due largely in part to the relative affordability of underutilized deindustrialized areas, as well as the positive impact the Clean Air Act, Water Quality Improvement Act, and other environmental regulations have had on water quality (Fischer, 2004). Brownfield development, various tax incentives and other redevelopment programs have since afforded the opportunity for cities to return to their urban waterfronts to meet commercial, recreational, and housing demands, and to serve catalysts for economic regeneration. This renaissance in waterfront revival has left a lasting mark on cities like Boston, San Antonio, and Baltimore, and many cities continue to emulate these successes to meet increasing demand for local economic development. Interaction with the water has proven to be a powerful attractive force, whether it be passive in the form of scenic views that enhance shopping or dining experiences, or active in the form of recreation, fishing, boating and other leisure activities.

One of the questions that must be addressed in replicating these successes, however, is determining what qualifies as a waterfront, and to what extent the

principles of waterfront redevelopment that lead to successful projects apply to different kinds of sites at smaller scales. Only one study was found that addresses considerations that smaller communities face in approaching complex and expensive waterfront developments. In a case study of small-scale riverfront projects, one key finding was that early public interest, involvement, and engagement, as well as having multidisciplinary planning teams were key factors in successful projects (Lorg, 2006). However, the study does not reach beyond the current understanding of waterfront redevelopment principally as an economic development endeavor, and its recommendations do not entertain exploring the value of smaller waterfronts for their ability to provide greenspace, mitigate the negative impacts of urbanization, and improve the health of watersheds and aquatic habitats. To address this gap, we must turn to a related but different set of literature and practices.

Greenways and Open Space

Robert Searns, in a seminal article on the evolution of greenways, details a succession of traditions in greenway design, noting that we are currently in a third generation of greenways. The first generation, dating from the 1700's to the 1960's, consisted of vegetated boulevards and axes serving as connections between urban places. The second generation, dating through the mid 1980's, includes those trail- and recreation-oriented greenways along rivers, ridgelines and abandoned railways granting access to natural places within urban environments. In the current generation of greenway, however, we find projects that have multiple objectives and

functions: they address ecological needs, providing corridors for the transmission of flora and fauna; they provide flood damage control and address other infrastructure needs; improve water quality; provide opportunity for education and recreation; and provide beautification as well (Searns 1995). Searns is not alone in his recognition of the multiple functions of urban greenways. There is also an economic argument to be made for greenways. A report by the National Park Service notes that:

> "Spending by residents on greenway-related activities helps support recreation-oriented businesses and employment, as well as other businesses that are patronized by greenway users. Greenways often provide new business opportunities and locations for commercial activities like bed and breakfast establishments, and bike and canoe rental shops. Greenways are often major tourist attractions, which generate expenditures on lodging, food, and recreation-oriented services (Fischenich 2001, 4)."

Hedonic pricing models provide additional evidence of the economic value of greenways and other open space in urban settings. These models consistently show property values being positively associated with proximity to urban parks and greenways (Crompton, 2001; Conway et al., 2008). For example, In Boulder, Colorado, housing prices declined an average of $4.20 for each foot of distance from a greenbelt, up to 3,200 feet away, and in one neighborhood the average decline was $10.20 for each foot of distance. And in Durham, North Carolina, the market value of homes decreased by $5.51 for each foot away from the Eno River open space

corridor (Florida Department of Environmental Protection (DEP), 1999). While tax revenues generated from increased property values of greenway-proximate development may not achieve unity with the cost to build and maintain these spaces, it is also true that the benefit they provide extends beyond the adjacent property owners to the wider public (Crompton, 2001).

Watershed and Stormwater Management

Searns also gives us clearer picture of how watershed and stormwater management practices impact urban waterways. He notes that conventional stormwater systems are designed to move runoff of stormwater across impervious surfaces into drains to be conveyed by pipes to the nearest body of water. But the increase in impervious surfaces such as parking lots, roads, and rooftops associated with urbanization has resulted in problems when these conventional systems are overwhelmed, increasing, rather than decreasing, the risk of flooding along nearby bodies of water. As water moves across these surfaces it picks up sediment and contaminants, carrying this polluted mix directly into urban streams, rivers, and lakes. The velocity of this unobstructed flow into streams and creeks also causes damage and erosion, further impeding the ability of riparian corridors to naturally filter out contaminates and slow the flow of water (Searns, 1995). A National Park Service report on stormwater and greenways points out that billions of dollars are lost annually to damage to stream and riparian ecosystems caused by urbanization, which reduces potential goods and services in the effected areas (Fischenich 2001),

and that "the economic impact on the community as a whole by taking land off the tax rolls for greenway conservation is more than offset by other economic returns (Fischenich 2001, 4).

Newer stormwater tactics, notes Searns, "emphasize use of a distributed system of stormwater structures which allow the water to infiltrate through pervious groundcover close to where it falls as rain, often allowing plants to filter out and removing any contaminants it might have accumulated (Searns 1995, 73). In addition, slowing down runoff increases the time to peak discharge of stormwater systems into nearby waterways, which reduces stream bank erosion, channelization, and the risk of flooding (Hunter, 2010). The NPS report also addresses the economic upsides of these practices:

> "Analysis of 20 real estate studies across the United States found that developers could charge a per-lot premium of up to $10,000 for homes situated next to well designed storm water ponds. Sale prices were nearly one-third higher for homes that had a view of a storm water wetland compared to homes without any "waterfront" influence in a comparison of home prices in Minnesota (Fischenich 2001, 4)"

Thus, greenways provide perfect opportunities to address stormwater infrastructure issues in a more ecologically sensitive way, while at the same time—as

we will see in the case studies—providing opportunities to develop public amenities and create economic value.

Case Studies

The following case studies present examples of small-scale urban waterfronts that incorporate key features of the three practice areas outlined above. These cases were selected based on their relevance to the idea that small urban waterways can be powerful catalysts for innovative and unique urban waterfront and greenway development.

Case 1: San Luis Obispo Riverwalk

Length/Size	Primary Objective(s)	Project Cost[1]
600ft (two city blocks)	Downtown revitalization, flood control	$100,000

The San Luis Obispo River walk is a small-scale project in both dimensions and cost, but has been transformative nonetheless for San Luis Obispo's small downtown. The San Luis Obispo Creek was initially targeted to be paved over to create additional parking for downtown businesses. This plan was proposed by downtown merchants, but was opposed by community members who hoped to see

[1] Hoobyar, 2002
[2] Information accessed at Mecklenburg County Parks and Recreation website: http://charmeck.org/mecklenburg/county/ParkandRec/Greenways/LittleSugarCreekGreenway/

better use of the creek. Through their opposition the eventually pressured the city to commission a study of alternatives, which concluded that the creek held economic value as an amenity and local resource. Eventually, a plan to develop the creek's potential was supported by the local business community as well, a fact they demonstrated by funding much of the creek restoration privately. The resulting project, pictured below, has been considered a resounding success. Not only has the Riverwalk become a destination in and of itself, but it also created new economic opportunities for existing merchants, many of whom have opened second storefronts reoriented toward the creek and created outdoor patios for dining and entertainment (Hoobyar, 2002). Even shops that do not open directly onto the riverwalk benefit from the extra foot traffic created by the pedestrian path, which draws people to the area (Hoffman, 2004).

The physical characteristics of the Riverwalk serve multiple functions. Terraced concrete walls were built to prevent scouring of the creek banks during storm events and high water flows. The creek bed was widened to allow more natural contours of channels and flows to develop, and the water quality and riparian environment has been greatly improved by landscaping designed to shade and cool the creek (Hoobyar, 2002).

Finally, concern over flood control contributed to the initial support for and design of the project. The city had experienced major flooding of its downtown streets resulting from the impacts of urbanization in the area. The lack of capacity

of underground culverts that were designed for lesser flows prior to urbanization, coupled with sedimentation and bottlenecks caused by debris accumulating in narrow areas of the creek contributed to these flood events, and the improvements to the creek bed were planned to address these issues as well (Hoobyar, 2002).

Overall, this example shows that even on a very small scale—just two city blocks—the restoration of a creek and reorientation of shops toward a below-grade pedestrian walkway produced a significant impact on the economy and character of the city's commercial center while providing significant ecological benefits to the watershed as well. Merchants located on the riverwalk include:

- A coffee shop
- A gourmet kitchen store
- Restaurants and fine dining
- A Candy shop
- An art gallery
- A toy store
- A florist
- A shoe store (Hoffman, 2004

View of San Luis Obispo Riverwalk Photo: LA Times Travel Section

Case 2: Little Sugar Creek Greenway, Charlotte, NC[2]

Length/Size	Primary Objective(s)	Project Cost
5.5 miles	Public greenway and open space, water quality improvement, flood damage reduction	$43M

The Little Sugar Creek Greenway in Charlotte, NC is perhaps the best example of the potential a Proctor Creek waterfront could hold. Much like Proctor

[2] Information accessed at Mecklenburg County Parks and Recreation website: http://charmeck.org/mecklenburg/county/ParkandRec/Greenways/LittleSugarCreekGreenway/

Creek, Little Sugar Creek has suffered from poor water quality and sewage problems in the past. In the 1960's, the creek was known as an area to get as far away from as possible. However, the greenway and restoration project has turned around perceptions of the creek and attracted businesses and residential development back to its corridor. Taking its inspiration from San Antonio's famous river walk, a project to create an urban waterfront atmosphere along the Little Sugar Creek was first recommended in the late 1960's by a local council member. The project was shelved due to a lack of funding, but after major flooding caused millions of dollars in property damage in the late 1990's, the greenway project was revisited, and bonds to fund the purchase of property in the floodplain were approved.

The greenway currently extends over 5.5 miles and consists of paved walking and bicycling trails that connect a series of parks and wetlands in Charlotte's urban center. These trails also connect residential neighborhoods, schools, a major hospital, a community college, and commercial areas. Principle features of the project include:

- Acquisition of 19 acres of floodplain and removal of 11 flood-prone buildings;
- The creation of wetlands and water gardens to reduce pollution and stormwater runoff and improve aquatic habitat;
- Removal of pavement covering the creek
- Creek bed, bank, and buffer zone restoration;
- Installation of multi-use trail with continuous, below-grade crossings

Building off its current success, the greenway trail will eventually extend to 15 miles along Little Sugar Creek, and connect to other trails in the region.

Little Sugar Creek Greenway Photo: Nancy Pierce, UNC Charlotte Urban Institute

Case 3: Historic Fourth Ward Park, Atlanta, GA[3]

Length/Size	Primary Objective(s)	Project Cost
17 Acres	Stormwater retention, public park	$25M

[3] Background information for this case was gathered via interviews by the author for a research paper assignment in the City and Regional Planning program at Ga Tech

While this case differs somewhat in form from the previous cases, it shares key elements and functions with the other cases that make it quite relevant to this study. The Historic Fourth Ward Park is a key feature of the Atlanta Beltline Trail, but the project originated as a response to major flooding of Clear Creek—one of many of Atlanta's urban creeks buried beneath the pavement. Insufficient capacity along the underground culverts to handle storm flows resulted in regular flooding in the basement of what was then known as City Hall East. Under a federal consent decree to address combined stormwater and sewer overflows, City Engineers developed a plan to dig a larger deep rock tunnel to move more water through and out of the watershed. However, local community groups agitated for a solution that would also address a lack of public green space in the area while handling stormwater at the source rather than moving the problem downstream. Eventually the idea of creating a stormwater pond and greenway that could double as a public amenity gained ground, and the city worked with community groups, local business groups, and the Atlanta Beltline planning staff to implement the project.

Recently completed, with future expansion still planned, the park incorporates a scenic trail around the pond within a basin designed to handle a 100-year flood event. The pond is also home to an amphitheater where annual community festivals and events are held. There is an impressive playground, bathroom facilities, a skate park, and a splash pad incorporated into the project as well, and the property that was subject to flooding is currently under development as

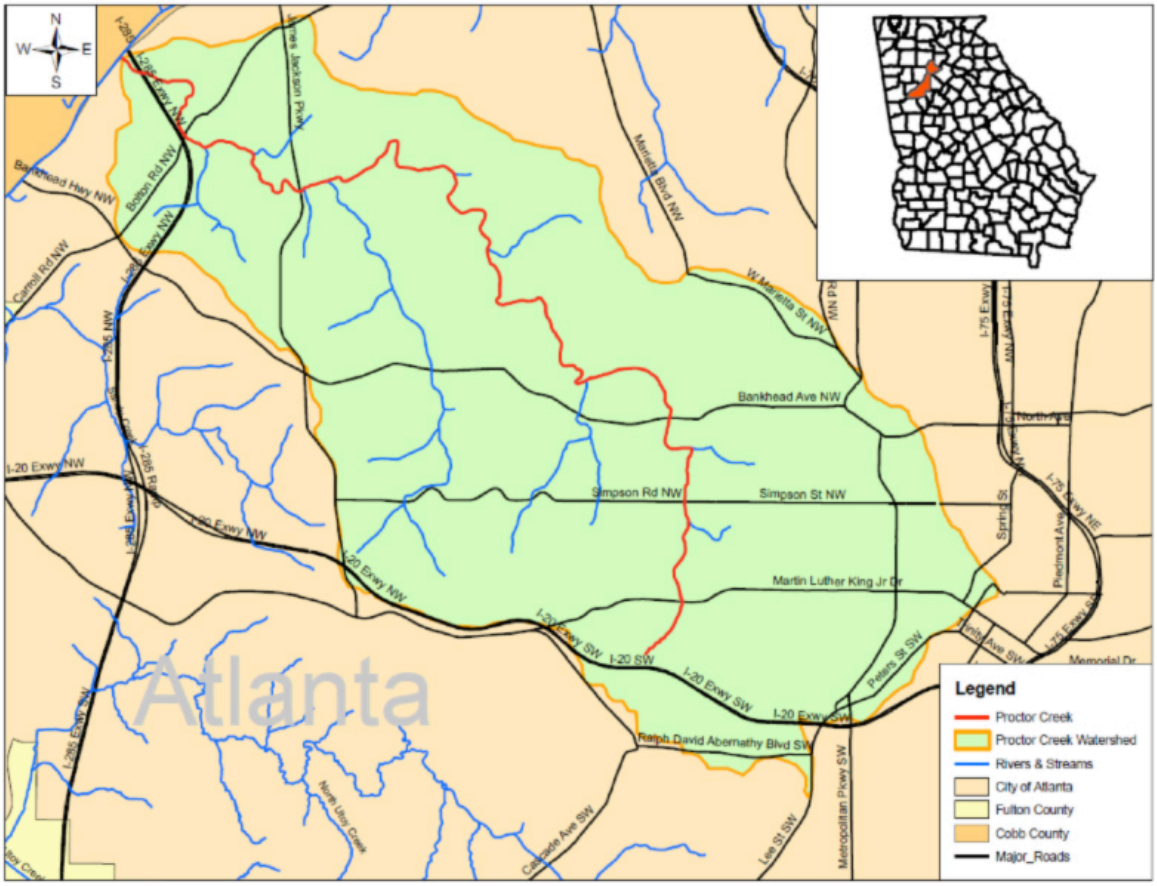
a major mixed-use marketplace that will be a focal point for economic activity in the area. Mixed-use housing developments with first floor retail now line the park and overlook the pond, and the surrounding area is seeing a significant economic resurgence. Perhaps the most interesting fact about the project is that it actually saved the city $15 million of the planned $42 million cost of building the alternative tunnel. But even more importantly, the project demonstrates a creative solution to address an urban watershed problem that improves the ecological value of the area, provides opportunity for recreation and social activity, and enhances the local economy.

Atlanta's Historic Fourth Ward Park Photo: Author

Part II: Recent Efforts in and around Proctor Creek

In this section I review recent organized efforts to address and improve conditions in the Proctor Creek watershed, highlighting efforts specifically related to Proctor Creek and its immediate surroundings. I begin with a description of the watershed to build an understanding of its physical, ecological, political and social context, then follow with a description of recent and current planning efforts and projects.

I. Overview of Proctor Creek Watershed



Source: City of Atlanta Department of Watershed Management

A watershed is typically defined as an area of land from which all water that flows under it or falls onto it drains into a common point[4]. Watersheds are also referred to as catchment basins or areas, depicting their principle morphological feature of catching all of the area's water and funneling it into an eventual drainage course that drains water from the area. Because watersheds are bounded and defined by geological features, they often cross multiple political jurisdictions. The Proctor Creek subwatershed, however—part of the larger Chattahoochee watershed—is contained entirely within the city of Atlanta.

The watershed is comprised of over 16 sq. miles (10,198 acres) of primarily urban residential and commercial land on the northwest side of the city, and boasts a population of over 120,000, making it the most densely populated watershed in the country. The creek itself flows from smaller tributaries originating on the western edge of downtown Atlanta, roughly nine miles northwest until it reaches the Chattahoochee River a few miles downstream of Atlanta's drinking water intake and treatment plant.

While Atlanta's drinking water is not directly impacted by Proctor Creek, pollution is still a major health concern. Proctor Creek is considered by EPA to be an impaired stream, as it does not meet minimum standards for fecal coliform bacteria counts.[5] Contamination by the bacteria is due in part to combined sewer overflows

[4] U.S. Environmental Protection Agency: http://water.epa.gov/type/watersheds/index.cfm
[5] US EPA: http://www.epa.gov/research/healthscience/docs/proctor-creek-hia-factsheet.pdf

but is just one of many problems for those who come in contact with the creek and to those downstream of its terminus in the Chattahoochee river.

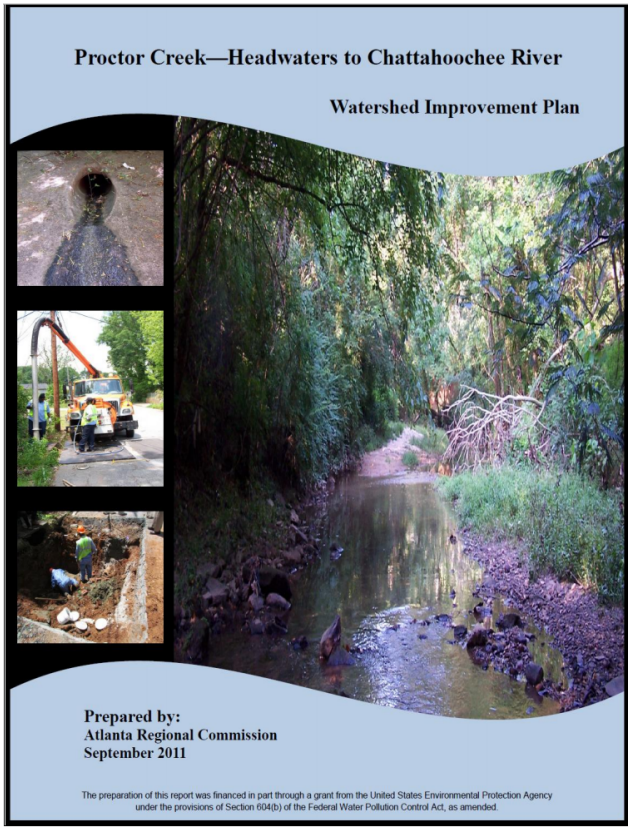
Illegal dumping, urban runoff and contamination from brownfields pose additional threats to the health of the creek and to residents of the many neighborhoods it passes through. Flooding of the creek also poses another major threat to residents of low-lying neighborhoods, where recurring floods have caused millions of dollars in damage to property and led to the relocation of over 60 households in the past decade.

Land cover and topography of the watershed contribute significantly to the poor water quality and for the creek's propensity to flood. While a third of the entire watershed is comprised of impervious cover (paving and other ground cover that prevents the ground's absorption of water that falls as rain), the highest elevation in the watershed's reaches is nearly 90% impervious. This area is comprised of the western edge of downtown Atlanta as well as the Atlanta University Center. The implication is that development in the headwaters of Proctor Creek has a significant impact on the entire system downstream.

II. Planning Efforts, Partnerships, and Projects

Proctor Creek Watershed Improvement Plan

According to the published report, the draft September 2011 Watershed Improvement Plan was compiled by the Atlanta Regional Commission as part of an effort to: "1) develop local capacity to monitor stream segments not meeting state water quality criteria; 2) identify potential sources of pollution in the watershed; 3) identify appropriate management measures for restoring water quality based on identified sources; and 4) provide information needed to support local Section 319(h) Nonpoint Source Implementation Grants."[6]



This multi-year endeavor documented and described existing conditions along the stream segment through water quality sampling and visual field surveys, identified potential point and non-point sources of pollution, and made

[6]Atlanta Regional Commission: http://www.atlantaregional.com/environment/water/cleaner-streams/chattahoochee-and-flint-river-basins/watershed-improvement-plans

recommendations for the use of stormwater best management practices (BMPs) as part of an improvement plan for the impaired creek. The process also identified other stakeholders involved in watershed improvement efforts including many of the organizations described in this paper. These included:

- City of Atlanta Bureau of Watershed Management
- Upper Chattahoochee Riverkeeper
- West Atlanta Watershed Alliance (WAWA)
- Community Improvement Association
- Park Pride
- The Trust for Public Land (TPL)
- Neighborhood Planning Unit G (NPU-G)
- City of Atlanta Adopt-a-Stream Program
- Atlanta Regional Commission

Federal Urban Waters Partnership (EPA)

One of the most interesting recent developments relating to Proctor Creek is its designation in May of 2013 under the Urban Federal Waters Partnership program. The goal of the partnership is to reconnect economically distressed communities with their local waterways through improved water quality and access. While the designation is not directly accompanied by grant funding for specific projects, it includes a directive for cooperation among 13 federal agencies to:

- "Break down federal program silos to promote more efficient and effective use of federal resources through better coordination and targeting of federal investments;

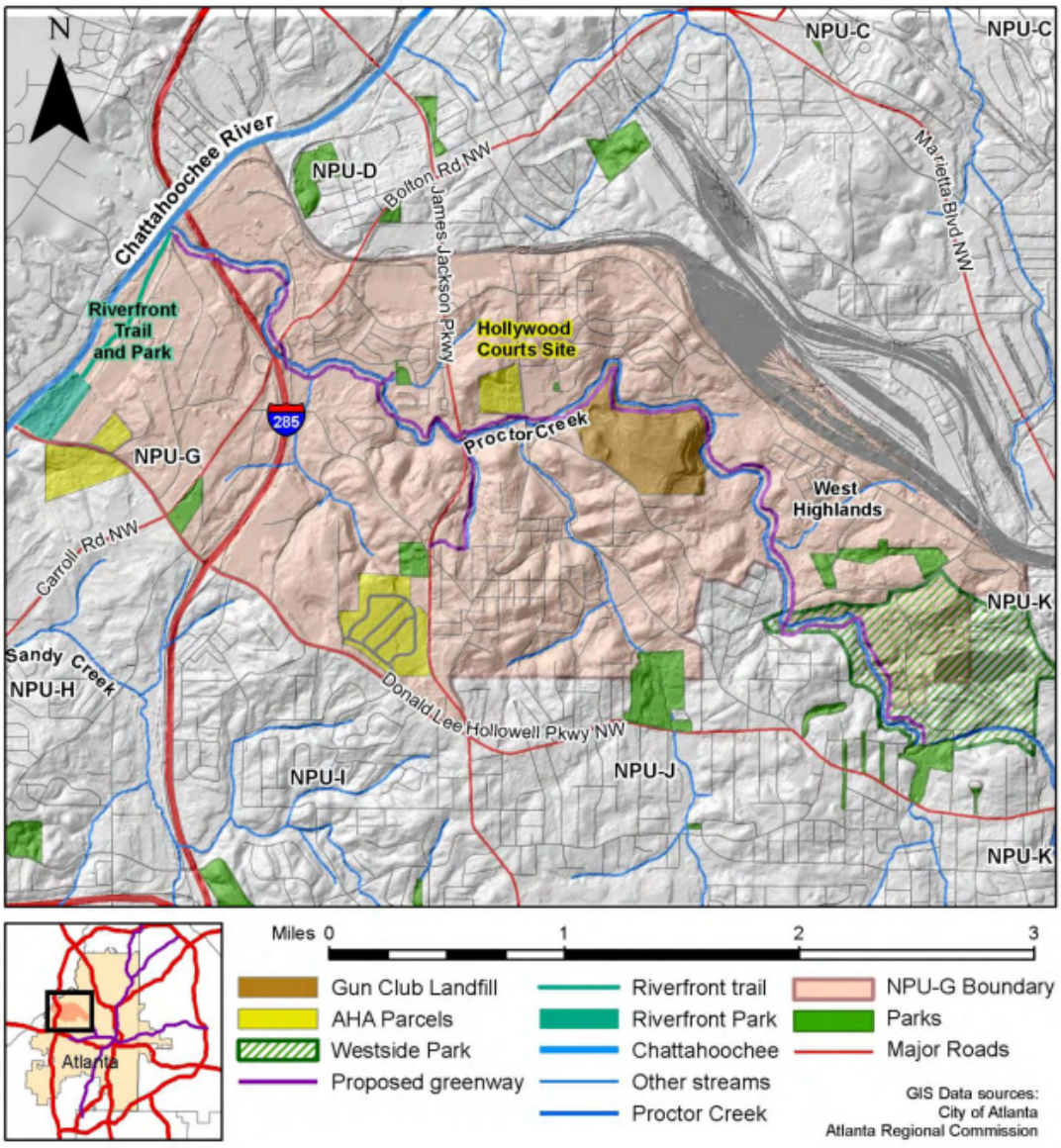
- Recognize and build on local efforts and leadership, by engaging and serving community partners; and
- Work with local officials and effective community-based organizations to leverage area resources and stimulate local economies to create local jobs."[7]

The designation seems to be both an acknowledgement of the dire conditions in the Proctor Creek watershed, as well as recognition of the growing energy, efforts and collaboration among various civic, non-profit, and government agencies around improving the creek. Where this designation will lead remains to be seen, but it has already served to energize ongoing efforts.

A press release from the Mayor's office about the partnership links the announcement of the designation to efforts by other private and non-profit entities to develop a system of linear parks and greenspace along the creek connecting to the Atlanta Beltline and the Chattahoochee River trail.[8]

[7] Retrieved March 31, 2014 from: www.urbanwaters.gov
[8] Retrieved March 20, 2014 from City of Atlanta website: http://atlantaga.gov/index.aspx?page=672&recordid=1955

Blueprints for Successful Communities: NPU G Master Plan (Georgia Conservancy)



In 2010, with assistance from a planning studio class from Georgia Tech's School of City and Regional Planning, the Georgia Conservancy—a non-profit

dedicated to improving air and water quality and preserving greenspace—spearheaded a planning process for NPU G entitled "*Blueprints for Successful Communities.*" With the goal of creating a 15-year sustainable community design plan, the process involved acquiring and synthesizing local stakeholder input into the needs, desires, and assets of the community, and providing recommendations for "redeveloping an existing community to better incorporate and focus on natural resource protection, green space accessibility, sustainable land use, and live-work connectivity."[9]

Geographically, NPU G lies in the northwest portion of Proctor Creek's watershed, and contains a significant portion of Proctor Creek and the Chattahoochee River.

Consequently, the *Blueprints* plan considers these elements as natural corridors with the potential to provide missing connectivity, green space, and amenity value. The figure above depicts the multiple elements incorporated into the plan, including the proposed Proctor Creek greenway trail and Chattahoochee River trail, and their relation to existing and proposed amenities. The plan acknowledges that the greenway proposal along Proctor Creek is not new, noting its recommendation in Atlanta's Project Greenspace, the PATH Foundation's 20-yr plan, the Atlanta Beltline plan, and the Atlanta Strategic Action Plan from previous years. However

[9] NPU-G Community Master Plan: A Live-Work-Play Approach to Upward Mobility Blueprints for Successful Communities. Fall, 2010.

the team has carried the concept forward from a conceptual to a practical level. Highlighting several of the greenway's potential benefits, the report states:

> "Providing an integrated and well-connected network of off-road paths for pedestrians and cyclists is a key aspect of a livable and walkable community. By preserving natural areas within cities, greenways also help to protect wildlife habitat while at the same time serving as hands-on environmental classrooms for the community. Greenways can also help to maintain existing floodplains by preventing soil erosion, as well as serving as a filter for stormwater runoff."[10]

This potential multi-objective corridor would accommodate pedestrian and bicycle traffic via a 10-12 foot elevated boardwalk, since it would be built within the floodplains of Proctor Creek. While the City of Atlanta's floodplain ordinance includes a mandatory 75-ft buffer between any watercourse and the addition of any impervious surfaces, multi-use trails and greenways are exempted from this restriction, and an elevated boardwalk would minimize the impact of additional impervious cover.

The plan also recommends a more primitive trail along a section of the Chattahoochee River, in accordance with the Chattahoochee Corridor Plan (CCP) regulations that were developed as part of the Metropolitan River Protection Act.

[10] ibid. p14

This swath of land to the south of Proctor Creek's confluence—as depicted in the figure above—includes additional features recommended for conversion into amenities. These include a wet/retention pond, the closed Gun Club landfill site, vacant Atlanta Housing Authority parcels, and the former General Shale brick factory.

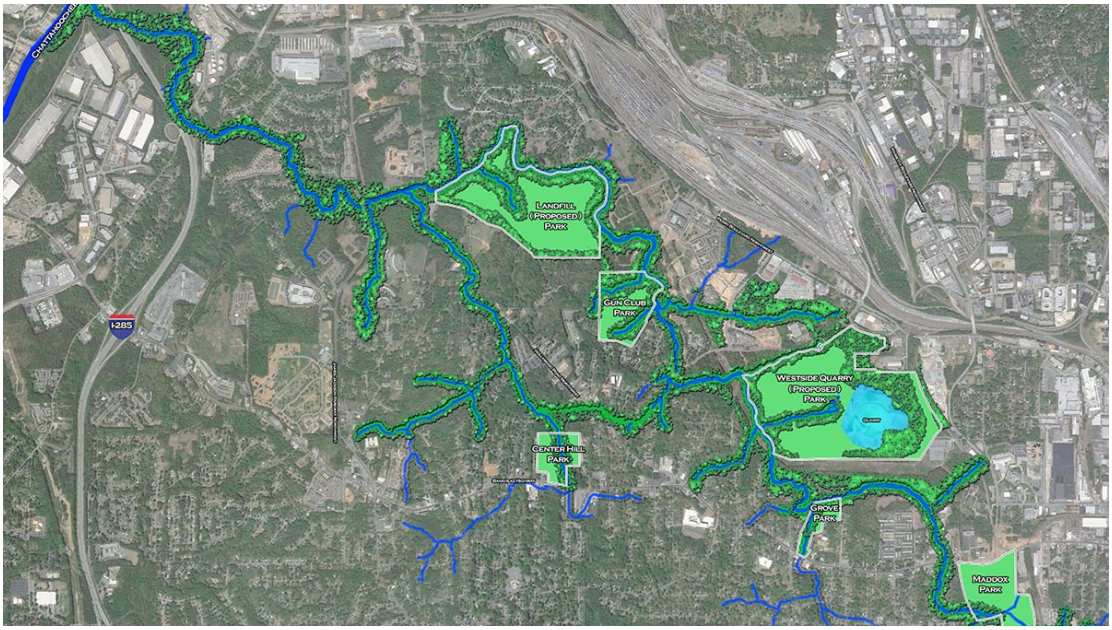
Emerald Corridor

Emerald Corridor, LLC is a private partnership working with the Trust for Public Land and several other agencies (including EPA and the Army Corps of Engineers) on a large-scale greenway development project along Proctor Creek. Founded by a group of real estate and design professionals, the idea behind the project is to develop an urban stream mitigation bank. The bank will sell mitigation credits to other unrelated projects as offsets to any harmful environmental impact they may cause. Funds raised through the sale of these credits will go toward the purchase, protection, and restoration of land around Proctor Creek. Emerald Corridor will coordinate closely with the Trust for Public Land, which has committed to designing and building a path along the creek—a key feature of the project.

Due to the nature of the proposed project, and given the fact that an application to the Army Corps of Engineers for approval of the mitigation bank designation is still pending, details about the plan have been scarce, save for a few

articles in the local press.[11] However, some public information about the project is starting to emerge via a new official website.[12] According to the site, the project would include a network of linear parks and trails along Proctor creek, with 7 miles of waterfront trails and an additional 400+ acres of greenspace added. The plan would connect six existing and proposed parks, and provide protective buffers surrounding the stream bank between 100' and 150' wide.

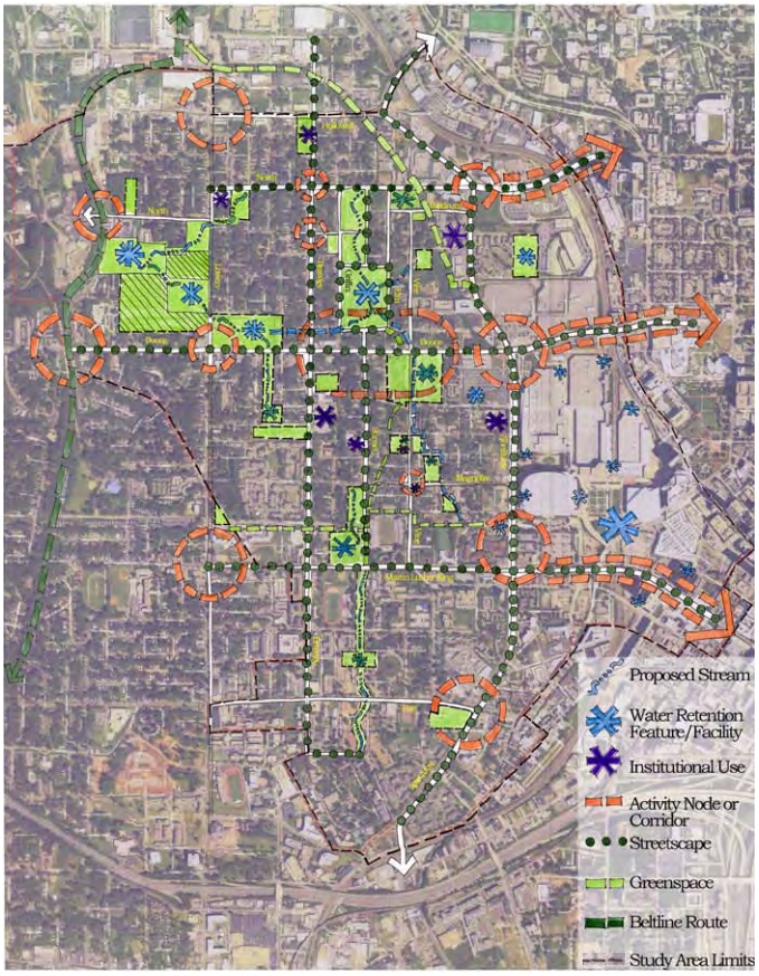
Because of the intentionally limited publicity surrounding this project until recently, it remains to be seen how public input will further shape the plan. However, from the details have emerged, the plan appears to be in line with prior proposals for parks and greenspace along the creek put forward by other groups.



[11] Wheatley, T. (2013, May 22). Proctor Creek's Second Chance. *The Creative Loafing*. http://clatl.com/atlanta/proctor-creeks-second-chance/Content?oid=8279805
[12] Retrieved March 20, 2014 at: http://www.emeraldcorridor.com/

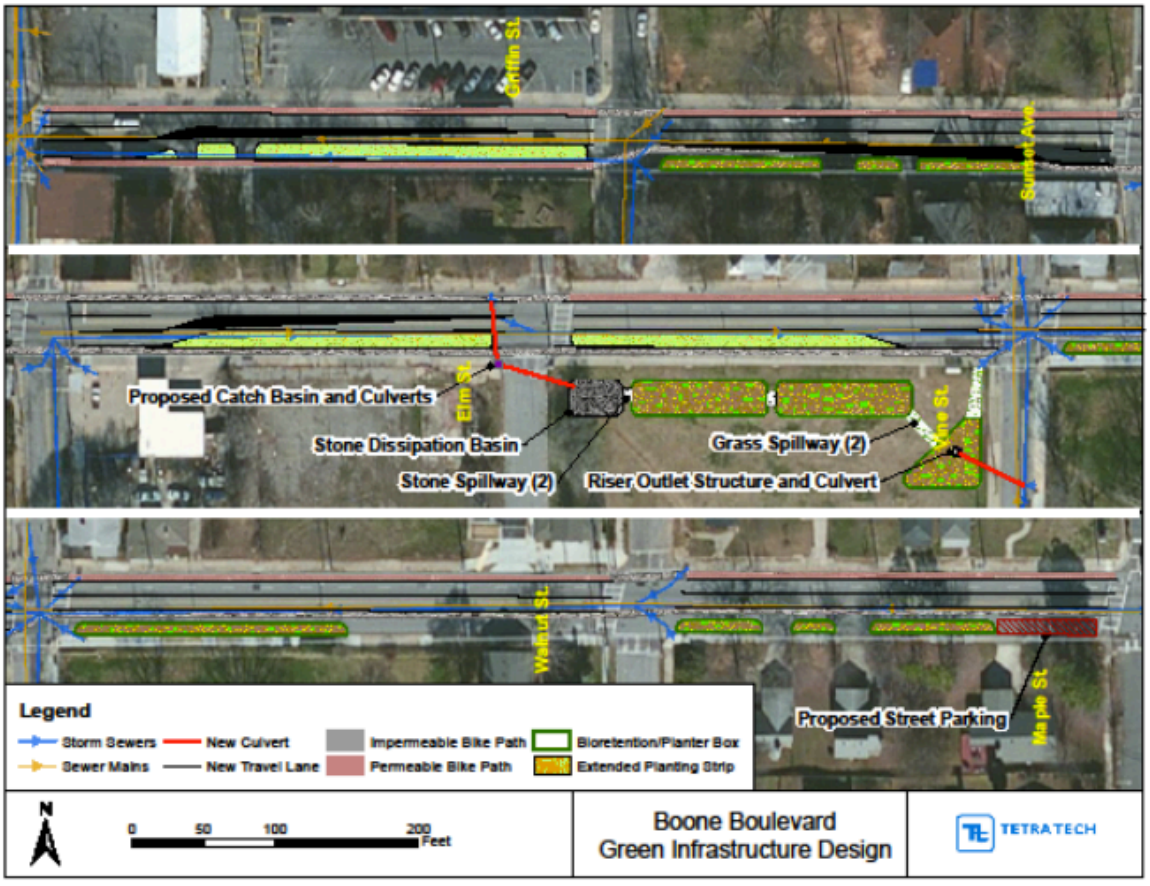
Proctor Creek North Avenue Watershed Basin Green Infrastructure Vision (Park Pride)

Park Pride—an Atlanta-based non-profit that works with communities to improve their parks—undertook a visioning study in 2010 in the subwatershed that makes up the headwaters of Proctor Creek. This area, which includes Vine City, English Avenue, and Atlanta University Center neighborhoods, has suffered from significant flooding and poor water quality due to intense development and an overtaxed sewer system. These highly urbanized Atlanta neighborhoods also suffer from a significant lack of greenspace. The study sought to identify ways to relieve pressure on the sewer system by proposing parks, greenspace, constructed stream beds, and stormwater detention ponds that could double as public amenities while collecting, storing, and cleaning runoff from storm events. The highly connected set of features that the plan proposes integrate concepts of green



infrastructure with economic and community development goals by providing solutions that add environmental, social, and economic value. The plan includes catalytic projects that are designed to stand alone and spur improvement to surrounding neighborhoods, but also offers a vision for the entire subwatershed, with goals for infiltration and storage capacity capable of preventing future flooding and contamination.

Boone Green Street Pilot Project (DWM) and HIA (EPA)



The Boone Green Street Project is a pilot project initially identified in Park Pride's PNA study and represents the first green infrastructure project planned for implementation within the headwaters of Proctor Creek. Managed by the city's Department of Watershed Management, the project will convert a short segment of Joseph E. Boone Boulevard—a main thoroughfare passing through the Vine City and English Avenue neighborhoods—into a "green street." The planned project will include green infrastructure features such as planter boxes bioretention areas, and permeable paving to minimize stormwater runoff from the site. The project will also include bicycle lanes and pedestrian-friendly alterations to address other stated community needs. The purpose of the project is to address sewer capacity and flooding problems in the neighborhood through the use of green infrastructure in order to better manage the quantity and quality of stormwater that enters the watershed.

III. Community Stakeholder groups

West Atlanta Watershed Alliance (WAWA)

The West Atlanta Watershed Alliance (WAWA) is a community based non-profit that has been actively engaged in watershed and environmental issues in Atlanta's west side since 1995. Organized initially as an environmental justice organization to oppose the installation of a combined sewer facility in a predominantly low income African American neighborhood, WAWA has grown into an well-known local environmental advocacy group that works to preserve greenspace and improve water quality in underrepresented neighborhoods. The group now operates the Outdoor Activity Center, a 26-acre urban forest and nature preserve, which offers local residents the opportunity to interact with and understand the natural environment in an otherwise urban setting. They are involved in hosting outdoor educational activities and organizing clean ups along Proctor Creek.

WAWA has also been involved in watershed planning activities such as the Watershed Improvement Plan, which was sponsored by the Atlanta Regional Commission, and is an active partner in the new Federal Urban Waters Partnership for Proctor Creek.

Proctor Creek Stewardship Council

The Proctor Creek Stewardship Council (PCSC) is a recently formed group of community activists. While they have been engaged in other environmentally focused activities via partner organizations (or as individuals) in their communities, they have come together under one banner now that there is more focused attention on Proctor Creek. In its own words,

> "The Proctor Creek Stewardship Council is a grassroots group of stakeholders who live and work the watershed. Supported by partner organizations including the West Atlanta Watershed Alliance, Community Improvement Association, Eco-Action and Georgia State, the Council works together to identify solutions to the challenges facing the watershed and press for action."[13]

The Council has been gearing its activities toward supporting efforts to get local residents involved in helping to clean up and monitor individual sections of Proctor Creek. As one example, members are working with the Upper Chattahoochee Riverkeeper to train residents and provide support to conduct water quality sampling in local stream segments. Other planned activities include field trips, skill-building workshops, education, and capacity building.

[13] Proctor Creek Stewardship Council Website: http://www.proctorcreek.org/

But beyond specific activities like this, PCSC is becoming a repository for the collection and dissemination of local knowledge about Proctor Creek, and a focal point for coordinating grassroots-led activities pertaining to the watershed. Meetings generally include a healthy cross section of participants, including community members, members of other non-profits, neighborhood representatives from NPUs, students involved in special projects related to Proctor Creek, and government representatives from the city and from EPA. Meeting agendas typically include updates from these various representatives reporting on all activities related to the watershed. While in its early stages and still evolving, PCSC may prove to be an important inflection point in the burgeoning focus of activities around Proctor Creek.

Community Improvement Association

The Community Improvement Association (CIA) is a small non-profit focused mainly on environmental issues in and around Atlanta's English Avenue and Vine City neighborhoods. One of the motivating factors in forming the organization was to advance the idea that environmentalism is just as important in poor African American communities as it is in more affluent communities, and the group bills itself as a "community-based, environmental justice organization

educating disadvantaged communities on environmental technologies, green jobs, watershed & waste management and political advocacy."[14]

CIA has been involved in multiple efforts related to Proctor Creek, including participation in community clean ups and as a stakeholder in the Atlanta Regional Commission's Watershed Improvement Plan for Proctor Creek, as well as Park Pride's Proctor Creek – North Avenue Study. CIA is currently actively engaged in the Proctor Creek Stewardship Council described above.

Eco-Action

Eco-Action is another community-based non-profit with a focus on providing environmental health education, capacity building, and environmental health advocacy in low-income neighborhoods. The group's core mission is to help communities organize around environmental health problems such as soil contamination, air pollution, and water quality with an emphasis on citizen participation and social justice.

[14]At noted on the founder's website: http://tonytorrence.wix.com/atlantacia#!about/c20r9

Riverwalk Atlanta and Groundwork USA

Riverwalk Atlanta is a non-profit organization dedicated to the development of parks and trails along the Chattahoochee river, with a specific focus on the northwest side of Atlanta. The group has recently entered into an agreement with Groundwork USA, a national non-profit organization that works with communities to convert liabilities such as vacant, blighted land and polluted waterways, into assets. Through a grant from the National Park Service, Groundwork USA is working with Riverwalk Atlanta to build local capacity to address community needs relating to the Chattahoochee River and Proctor Creek and the northwest Atlanta neighborhoods they intersect with—primarily NPUs D and G.

Thus far, the group has formed a steering committee and has been holding monthly meetings to identify its scope of work. The steering committee meetings are attended by an impressive list of members from city government (Parks and Recreation, Watershed Management, Mayor's office), Georgia Power, the Trust for Public Land, the Conservation Fund, the Georgia Conservancy, Chattahoochee Riverkeeper, EPA, National Park Service, and many others. The group's immediate

goals are to identify and spearhead projects that address community needs and result in sustainable funding. The group has identified potential projects along Proctor Creek, including improvements to the Gun Club landfill and other potential parks, a trail and linear park system along the Chattahoochee connecting to Cobb County, the conversion of the General Shale brick factory and Hartsfield Incinerator Plant to a public amenity, as well as opportunities to redevelop vacant land owned by the Atlanta Housing Authority.

Part III: Analysis and Discussion

Thus far I have described a number of plans, organizations, and partnerships with goals of improving conditions in and around Proctor Creek. But how do all of these pieces fit together? Where is there overlap among these various entities and their proposals, and where are the gaps? In this section I explore the connections and relationships between these various efforts to identify common themes that could help enhance and expand their potential impact.

I. Plans and Projects

The plans and projects described above differ in both geographical and topical scope. Geographically speaking, they can be divided into three categories:

1) ***Headwaters***: The higher elevation area portion of the watershed stretching from the western arc of downtown and the Atlanta University Center into the Vine City and English Avenue neighborhoods until Proctor Creek appears permanently above ground near I-20 (to the south) and Washington Park (to the east);

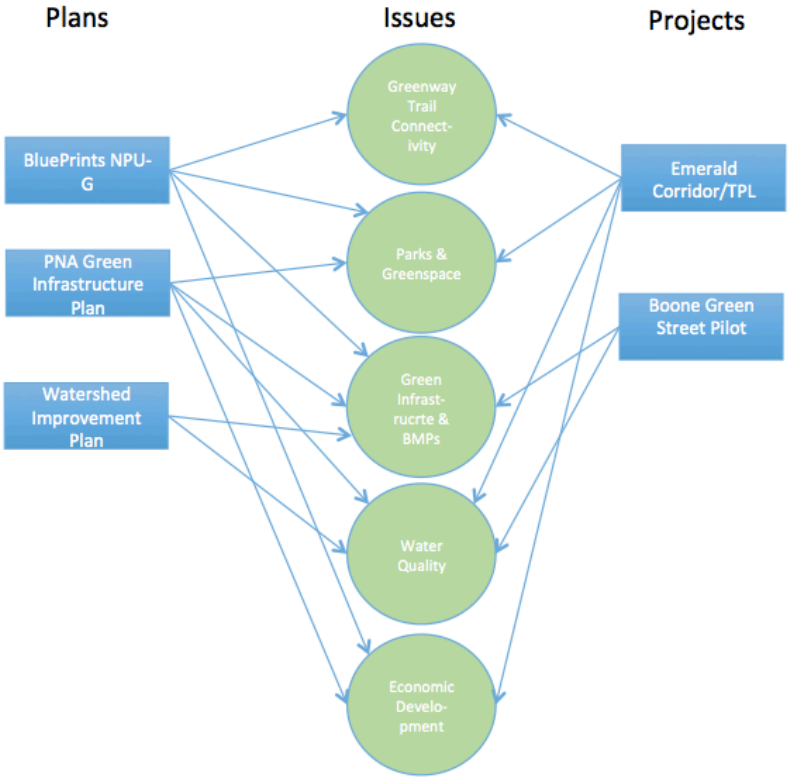
2) ***Mainstream***: The 9-mile segment of Proctor creek that flows above ground and its confluence with the Chattahoochee River; and

3) ***Satellites***: Scattered, site-specific projects that represent discrete, pre-designed projects.

From a topical standpoint, plans and projects address a number of overlapping themes, including:

- Water quality improvement (from both point and non-point sources)
- Flooding and flood mitigation
- Green infrastructure and stormwater BMPs
- Access to parks and greenspace
- Connectivity and linear park systems
- Economic development

The figure below shows the connections between these plans, projects, and issues they seek to address. While difficult to quantify, plans tend to emphasizse green infrastructure and stormwater management in the ***headwaters***, while there is more of a focus on linear parks and greenways and economic development in the ***mainstream***. This would seem to make sense as the



issues in the watershed's higher elevations may call for different strategies and address different challenges (and opportunities) than those in the its lower reaches. For example, Park Pride's plan addresses part of the watershed that is highly impervious (over 80% in some places), and therefore focuses on capturing, slowing, infiltrating, and processing stormwater before it reaches the pipes that eventually flow into the main stem of the creek. Likewise, the Watershed Improvement Plan focuses on identifying and mitigating against point and non-point sources of pollution before these contaminate the creek. Further downstream, however, where the natural course of Proctor Creek flows above ground, the focus is more on restoring, protecting, and enhancing the creek as community asset and opportunity. But it is important to draw the connections between the highly urbanized headwaters and the more residential and forested lower reaches, since the health of the latter is directly dependent on what happens to the former.

II. Organizations and Partnerships

The organizations and partnerships I have described, while not an exhaustive list, represent a fairly broad cross section of federal and local government agencies, and national, local, and neighborhood based non-profits. Interestingly, there is an increasing amount of cross-pollination—not only horizontally between like agencies—but also vertically across virtually all of the groups and organizations. To illustrate, take for example a meeting of the Proctor Creek Stewardship Council, which might include not only local non-profits such as WAWA, Community

Improvement Association, and Eco-Action, but also representatives from the EPA, Georgia Environmental Protection Department (EPD), Watershed Management, and representatives from City Council and NPUs. Conversely, a meeting held by the EPA on its health impact assessment of the Boone Green Street project might be located in the middle of the Proctor Creek headwater communities, and attended by many of the same community groups and agencies listed above.

I suggest three distinct but not mutually exclusive implications based on this observation. First, it could signify a growing level of interdependence among groups who may specialize in specific topics, represent specific interests, or bring key resources and expertise to the table, possibly leading to an organic division of labor. Second, it may signal a certain level of issue saturation, meaning that key and central issues are beginning to converge from these diverse efforts. Finally, it may also represent a certain lack of cohesion or consensus around where each group should focus its efforts, or perhaps how the efforts should be divided. While this could be a result of the fact that all of those involved might feel they have a stake in the outcomes of each project or effort, the other side of the coin is that there may be a need to develop more trust and mutual understanding between the different groups so that they might reach a more efficient level of organization.

Finally, given apparent consensus around the idea of a linear trail and greenway system along Proctor Creek, it will be interesting to see how plans for the system develop. Because funding for acquisition and construction large portions of

the project are dependent on an as of yet untested model—that of an urban stream mitigation bank—plans have necessarily remained below the public radar until recently. Partnering with a the Trust for Public Land—an agency well-known to many of the community groups already—for the development of the trail will only help Emerald Corridor build the trust it needs to gain buy-in for the project to succeed.

III. Recommendations and Considerations

Based on observations above about the efforts taking place in the Proctor Creek watershed—and those groups behind them—a few recommendations are possible. First, to the extent to which the cross pollination between organizations and interest groups is productive, this interaction should be encouraged and given a platform. This may already be happening organically via the Proctor Creek Stewardship Council, but consideration should also be given to how the Federal Urban Waters Partnership might contribute to the structure of such interaction. Involvement of the Federal Partnership—in whatever form it takes—may lend additional weight and stature to this forum. However, it is also important that individual community groups who have a specific geographic or topical focus do not get drowned out in such a setting, and so it may be important for individual groups to remain differentiated with respect to their mission, goals, and activities. They could achieve this while continuing to have representation in a more open forum by assigning representatives to attend consolidated meetings and reporting back to the

group (and vice versa). Based on what I observed at various meetings this seems to be happening already to a certain extent, though perhaps not in a formalized manner.

Another possible way to achieve the same goal could be the creation of an online clearinghouse of meetings, programs, projects, and activities. Many, if not all, of the organizations listed have their own websites. However, some of these sites have not been updated in months and even years. Website development and maintenance can be labor and skill intensive, and if this function could be consolidated in a dedicated website that serves as a forum and clearinghouse, it could go a long way toward creating the real-time flow of information and ideas that all of these organizations are eager for. It could also further enable the discovery of synergies and the reduction of duplicative efforts.

The idea of the *headwaters*, *mainstream*, and *satellites* might also be a helpful concept to incorporate into discussions about specific projects, helping to identify where each proposal fits into the larger picture, and then drilling down to the function and purpose of each project. Prioritizing among the many ideas that these groups have promulgated will always be difficult no matter what, as funding is never sufficient to pursue every project. But reaching a wider consensus about what types of projects can address as many overlapping missions and goals as possible could help generate buy-in and energy to help push those transformative ideas forward. Right now, it seems like the Proctor Creek Greenway is gaining that type of

momentum, but it will take careful coordination and patience to continue to shepherd the process forward.

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